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EXAMINER	
BELLAMY, TAMIKO D	

ART UNIT	PAPER NUMBER
2856	

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

N

Office Action Summary	Application No.	Applicant(s)	
	10/711,081	PRINCE, DENNIS SCOTT	
	Examiner	**Art Unit**	
	Tamiko D. Bellamy	2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15,17,18 and 27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *11,14,15,17 and 18* is/are allowed.

6)☒ Claim(s) *1-4,6-10,12,13 and 27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities:

a. Line 11, delete the word "and" before the word lines.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-4, 6-10, 12, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cobb (5,604,299).

Re claims 1 and 9, as depicted in figs. 1 and 2, Cobb discloses positioning a sensor array of emission sensors (e.g., measuring stations A-F) in spaced relation at fixed location about a facility, and monitoring the emission readings from the sensors (A-F), and a direction of those increased emissions (Col. 3, lines 11-54). As depicted in fig. 2, Cobb discloses performing a spatial temporal emission concentration analysis to identify the source of emissions (e.g., average concentration point P) where the source of emissions is considered to be an intersection of lines drawn from the sensors detecting increased emissions in the direction of the increased emissions (Col. 4, lines 47-68; Col. 5, lines 10). While Cobb does not specifically disclose superimposing known emission concentrations upon the sensors during a first monitoring cycle, Cobb specifically states

(See Col. 3, lines 37-43) sensing measurements of concentration, and wind direction and storing the data in a computer. Furthermore, the method Cobb discloses would operate equally as well if using the sensors to sense a known emission concentration as opposed to a unknown concentration. Therefore, to employ Cobb on superimposing a know emission concentration would have been obvious to one of ordinary skill in the art at the time of the invention since this reference explicitly teaches using a sensor array of emission sensors and monitoring the reading of each sensor.

Re claim 2, as depicted in fig. 2, Cobb discloses the sensor array of emission sensors (e.g., measurement stations (A-F)) at fixed locations. Cobb discloses that the concentration information may be obtained by any convenient method (Col. 3, lines 26-37), which is equivalent to using emission sensors that are portable.

Re claim 3, as depicted in fig. 2, Cobb discloses positioning a sensor array of emission sensors (e.g., measurement stations A-F) at fixed locations about a facility. Cobb discloses monitoring changes in emission readings from the sensors, and performing a spatial temporal emission concentration analysis to identify the source of emissions.

Re claim 4, Cobb discloses that the concentration information may be obtained by any convenient method (Col. 3, lines 26-37), which is equivalent to using emission sensors that are electrochemical sensors.

Re claims 6 as depicted in figs. 1 and 2, Cobb discloses positioning a sensor array of emission sensors (e.g., measuring stations A-F) in spaced relation at fixed location about a facility, and monitoring the emission readings from the sensors (A-F) and a

direction of those increased emissions (Col. 3, lines 11-54). As depicted in fig. 2, Cobb discloses performing a spatial temporal emission concentration analysis to identify the source of emissions (e.g., average concentration point P) where the source of emissions is considered to be an intersection of and lines drawn from the sensors detecting increased emissions in the direction of the increased emissions (Col. 4, lines 47-68; Col. 5, lines 10). While Cobb does not specifically disclose superimposing a gas compound that will react with the emissions as a way to amplify or isolate a signal of emissions, Cobb specifically states (See Col. 3, lines 37-43) sensing measurements of concentration, and wind direction and storing the data in a computer. Furthermore, the method Cobb discloses would operate equally as well if using such a gas compound. Therefore, to employ Cobb on superimposing a gas compound would have been obvious to one of ordinary skill in the art at the time of the invention since this reference explicitly teaches using a sensor array of emission sensors and monitoring the reading of each sensor.

Re claim 7, as depicted in figs. 1 and 2, Cobb discloses positioning a sensor array of emission sensors (e.g., measuring stations A-F) in spaced relation at fixed location about a facility, and monitoring the emission readings from the sensors (A-F) and a direction of those increased emissions (Col. 3, lines 11-54). As depicted in fig. 2, Cobb discloses performing a spatial temporal emission concentration analysis to identify the source of emissions (e.g., average concentration point P) where the source of emissions is considered to be an intersection of and lines drawn from the sensors detecting increased emissions in the direction of the increased emissions (Col. 4, lines 47-68; Col. 5, lines 10). While Cobb does not specifically disclose superimposing a gas compound that will

react with a gas and cause interference as a way to remove the interference or isolate the signal, Cobb specifically states (See Col. 3, lines 37-43) sensing measurements of concentration, and wind direction and storing the data in a computer. Furthermore, the method Cobb discloses would operate equally as well if using such a gas compound. Therefore, to employ Cobb on superimposing a gas compound would have been obvious to one of ordinary skill in the art at the time of the invention since this reference explicitly teaches using a sensor array of emission sensors and monitoring the reading of each sensor.

Re claim 8, as depicted in figs. 1 and 2, Cobb discloses positioning a sensor array of emission sensors (e.g., measuring stations A-F) in spaced relation at fixed location about a facility, and monitoring the emission readings from the sensors (A-F) and a direction of those increased emissions (Col. 3, lines 11-54). As depicted in fig. 2, Cobb discloses performing a spatial temporal emission concentration analysis to identify the source of emissions (e.g., average concentration point P) where the source of emissions is considered to be an intersection of and lines drawn from the sensors detecting increased emissions in the direction of the increased emissions (Col. 4, lines 47-68; Col. 5, lines 10). While Cobb does not specifically disclose superimposing a gas compound that will coat the surface of the sensors and makes the sensors hyper-sensitive, Cobb specifically states (See Col. 3, lines 37-43) sensing measurements of concentration, and wind direction and storing the data in a computer. Furthermore, the method Cobb discloses would operate equally as well if using such a gas compound. Therefore, to employ Cobb on superimposing a gas compound would have been obvious to one of ordinary

skill in the art at the time of the invention since this reference explicitly teaches using a sensor array of emission sensors and monitoring the reading of each sensor.

Re claim 10, Cobb discloses filtering data readings associated with certain conditions such as wind speed, wind direction, or concentration (Col. 4, lines39-42), which is equivalent to using emission specific filters to isolate the sensor sensitivity to emissions of interest.

Re claim 12, as depicted in fig. 2, Cobb discloses multiple sensors (e.g., measurement stations A-F). Cobb discloses that the concentration information bay be obtained by any convenient method. Cobb discloses that a gas/liquid chromatography may be used because of it sensitivity to many types of pollutants (Col. 3, lines 26-37), which is equivalent to multiple sensors tuned to measure different gases.

Re claim 27, as depicted in figs. 1 and 2, Cobb discloses taking emission readings with sensors (e.g., measuring stations A-F) from a plurality of locations about a facility, and monitoring the emission readings from the sensors (A-F) and a direction of those increased emissions (Col. 3, lines 11-54). As depicted in fig. 2, Cobb discloses performing a spatial temporal emission concentration analysis to identify the source of emissions (e.g., average concentration point P) where the source of emissions is considered to be an intersection of lines drawn from the sensors detecting increased emissions in the direction of the increased emissions are assumed to cross at the source of emissions (e.g., average concentration point P) (Col. 4, lines 47-68; Col. 5, lines 10). While Cobb does not specifically disclose superimposing known emission concentrations upon the sensors during a first monitoring cycle, Cobb specifically states (See Col. 3,

lines 37-43) sensing measurements of concentration, and wind direction and storing the data in a computer. Furthermore, the method Cobb discloses would operate equally as well if using the sensors to a know emission concentration as opposed to a unknown concentration. Therefore, to employ Cobb on superimposing a know emission concentration would have been obvious to one of ordinary skill in the art at the time of the invention since this reference explicitly teaches using a sensor array of emission sensors and monitoring the reading of each sensor.

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cobb (5,604,299) in view of Ando et al. (5, 879,943).

Re claim 13, Cobb discloses positioning a sensor array of emission sensors (e.g., measuring stations A-F) in spaced relation at fixed location about a facility, and monitoring the emission readings from the sensors (A-F) and a direction of those increased emissions (Col. 3, lines 11-54). As depicted in fig. 2, Cobb discloses performing a spatial temporal emission concentration analysis to identify the source of emissions (e.g., average concentration point P) where the source of emissions is considered to be an intersection of lines drawn from the sensors detecting increased emissions in the direction of the increased emissions (Col. 4, lines 47-68; Col. 5, lines 10). Cobb lacks the detail of a humidity module. Ando et al. discloses a humidity module. Therefore, to modify Cobb by employing an humidity module would have been obvious to one of ordinary skill in the art at the time of the invention since Ando et al. teaches a humidity detection device having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Cobb and Ando et al. since Cobb states that his invention

is applicable to locating a emission source using a sensor array and Ando et al. is only used to provide the added limitation of a humidity module.

Allowable Subject Matter

1. The indicated allowability of claims 5-9, and 13 is withdrawn in further review of the previously cited reference Cobb (5,604,299).

2. Claims 11, 14, 15, 17, and 18 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Re claims 11 and 14, the independent claim includes " the sensor array including redundant sensors to improve accuracy and identify sensors with erroneous readings " in combination with the remaining claim limitation is not taught and/or made obvious by the prior art. Cobb and Iwashige et al., considered closest to related art, each teach emission sensors in spaced relation at fixed locations about a facility, neither Cobb nor Iwashige et al. teaches **a sensor array including redundant sensors to improve accuracy and identify sensors with erroneous readings.**

Response to Remarks

3. Applicant's arguments with re to objection to the Oath and Declaration. Applicant has provides a copy of the Supplemental Declaration submitted on January.20, 2006. The objection to Oath and Declaration of Office Action 2/06/06 has been withdrawn.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamiko D. Bellamy whose telephone number is (571) 272-2190. The examiner can normally be reached on Monday - Friday 7:30 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tamiko Bellamy
T-B
October 14, 2006

Hezron S. Williams

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